IN THE CLAIMS

1. (Currently Amended) An apparatus for transmitting light comprising:

a first substrate having a first surface including at least one first optically active area;

a second substrate having a second surface positioned in opposing spaced apart relationship from said first surface, where said second surface ~~has~~ contains at least one second optically active area opposing said at least one first optically active area, where said second substrate is supported substantially by said first substrate;

a polymer layer disposed between said first and second substrates; and

a waveguide disposed within said polymer layer between said first and second optically active areas on said first and second surfaces, where said waveguide comprises a polymer core and a cladding for transmitting light therebetween.

2. (Original) The apparatus of claim 1, wherein said cladding comprises a second polymer, and wherein said first polymer is a photosensitive polymer.

3. (Original) The apparatus of claim 2, wherein said first polymer comprises a fluorinated polymer.

4. (Canceled)

5. (Original) The apparatus of claim 1 wherein each of said first and second substrates comprise a plurality of optically active areas.

6. (Previously amended) The apparatus of claim 1 wherein a space between said first and second substrates is substantially filled with polymeric material.

7. (Original) The apparatus of claim 6 wherein one or more additional structures are embedded within said polymeric material.

8. (Original) The apparatus of claim 1, wherein said first and second surfaces are substantially parallel and spaced apart by a distance which is in the range of about 0.02 mm to about 0.15 mm.

9. (Currently Amended) The apparatus of claim [4] 1, wherein said second substrate is an IC.

10. (Currently Amended) The apparatus claim [4] 1, wherein said second substrate is a waveguide daughter board.

11. (Original) The apparatus of claim 1 wherein one of said optically active areas comprises a photodiode.

12. (Original) The apparatus of claim 1 wherein one of said optically active areas comprises a semiconductor laser.

13. – 32. (Canceled).

33. (New) An apparatus for transmitting light comprising:

a first substrate having a first surface including at least one first optically active area, wherein said first substrate is an optical circuit board;

a second substrate having a second surface positioned in opposing spaced apart relationship from said first surface, where said second surface has at least one second optically active area opposing said at least one first optically active area;

a polymer layer disposed between said first and second substrates; and

a waveguide disposed within said polymer layer between said first and second optically active areas on said first and second surfaces, where said waveguide comprises a polymer core and a cladding for transmitting light therebetween.

34. (New) The apparatus of claim 33, wherein said cladding comprises a second polymer, and wherein said first polymer is a photosensitive polymer.

35. (New) The apparatus of claim 34, wherein said first polymer comprises a fluorinated polymer.

36. (New) The apparatus of claim 33 wherein each of said first and second substrates comprise a plurality of optically active areas.

37. (New) The apparatus of claim 33 wherein a space between said first and second substrates is substantially filled with polymeric material.

38. (New) The apparatus of claim 37 wherein one or more additional structures are embedded within said polymeric material.

39. (New) The apparatus of claim 33, wherein said first and second surfaces are substantially parallel and spaced apart by a distance which is in the range of about 0.02 mm to about 0.15 mm.

40. (New) The apparatus of claim 33, wherein said second substrate is an IC.

41. (New) The apparatus claim 33, wherein said second substrate is a waveguide daughter board.

42. (New) The apparatus of claim 33 wherein one of said optically active areas comprises a photodiode.

43. (New) The apparatus of claim 33 wherein one of said optically active areas comprises a semiconductor laser.